

What is claimed is:

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A switching system which includes a plurality of devices formed in a dual active structure, a device controller for controlling the devices, and a main processor, a path management and testing method for a switching system, comprising:

a step, in which the device controller checks a valid path and state change for each board, for forming a database using a main processor;

a step for searching the database and confirming a standby path; and

a step for performing a path test for the entire interval or a certain interval with respect to the active or standby path.

2. The method of claim 1, wherein said step for forming a path state database for each board includes:

a step in which the device controller reads a valid path for each board to a device at an initial state stage and informs a main processor of the read path;

a step in which the main processor forms a database using the read path;

a step for checking a device-based state change at a certain period; and

a step for editing the database based on the state change.

3. The method of claim 1, wherein in said step for checking the active path, in which an active path to the matched last receiving board is checked by the receiving side terminal, and an active path is checked in the reverse direction of the data transmission direction, and the entire active paths are searched by checking the switching path of the boards connected with the active path.

4. The method of claim 1, wherein in said standby path setting step, in the case that a certain path is set as an active path which is different from the current path by checking the valid path for each board with respect to the standby path which is set as the reverse path of the active path, the set path is changed.

5. The method of claim 1, wherein said path test step includes:  
a step for receiving a parameter value used for a path test;  
a step for forming a test path based on the parameter value;  
a step for inserting a test pattern data into an input side device;  
a step for extracting a test pattern data from an output side device; and  
a step for judging an error with respect to the test path interval by comparing an input data and an extraction data.

6. The method of claim 5, further comprising a step for setting the number of repetitions and setting a period for thereby repeatedly performing the test.

7. The method of claim 5, further comprising a step for performing an interval-based path test when the input data and the extracted data are different and searching an error interval.

8. The method of claim 5, wherein said parameter value indicates the kind of a test path and a test type, a board for inserting or extracting a test pattern data, a subsystem in which the board is mounted, a link number in the subsystem,

and a pattern data used for the test.

9. The method of claim 8, wherein said parameter value includes a value which indicates a test repetition period and repetition number.

10. In a switching system of a dual active structure, an actual active path judging method, comprising:

checking an active path formed in a direction of a matched last receiving board at a receiving side terminal;

checking an active path in the reverse direction of a data transmission direction; and

searching an entire active path by checking a switching path of the board connected to the active path.

Sub 11. In a switching system of a dual active structure, a standby path test method, comprising:

a step for checking an active path formed in a direction of a matched last receiving board at a receiving side terminal, checking an active path in the reverse direction of a data transmission direction, and searching an entire active path by checking a switching path of the board connected to the active path;

a step for setting a reverse path of the active path as a standby path; and  
a step for performing a path test with respect to the set standby path.

12. The method of claim 11, wherein said path test step includes:

a step for receiving a certain parameter value needed for a path test;

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a step for forming a switching path based on the set standby path;  
a step for inserting a test pattern data into the input side device;  
a step for extracting a test patten data from the output side device;  
a step for judging whether there is an error in the standby path based on a  
5 comparison result with respect to the input data and the extraction data; and  
a step for searching an error interval by performing an inter-based path  
test in the case that the input data and the extracted data are not same.

10 13. The method of claim 12, further comprising a step for repeatedly  
performing a test by setting the number of repetitions and period.

15 14. The method of claim 12, wherein said parameter value indicates a  
test type, a board for inserting or extracting a test pattern data, a subsystem for  
mounting the board, a link number in the subsystem, and a pattern data used for  
the test.

20 15. The method of claim 14, wherein said parameter value indicates a  
test repetition period and repetition number.

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